

**UNIVERSITI TEKNOLOGI MARA**

**COMPARISON BETWEEN DICHOPTIC  
TRAINING AND PATCHING THERAPY IN  
AMBLYOPIA TREATMENT**


**NIERBAIZA SHUHADA BINTI IBRAHIM**

**BACHELOR OF OPTOMETRY (HONS)  
FACULTY OF HEALTH SCIENCE**

**JULY 2016**

## **AUTHOR'S DECLARATION**

I hereby declare that the works in this project was my own except for the quotations and summaries which have been acknowledge. The project had not been accepted for any degree and was concurrently submitted for any award of other degree.



---

NAME: NIERBAIZA SHUHADA BINTI IBRAHIM

ID NUMBER: 2012202148

DATE: 18/7/2016

## **ABSTRACT**

The current approach to the treatment of amblyopia was problematic for a number of reasons. First, there was some issues of compliance to the conventional treatment of amblyopia in which the patching therapy. Current studies had introduced dichoptic training which was a binocular approach that was showing promise in initial clinical studies. However, the effectiveness of the dichoptic training was still being questioned. Thus, the purpose of this study was to identify the comparison between dichoptic training and patching therapy in amblyopia treatment finally to propose a more effective treatment in treating amblyopia patient. This study was done by using the systematic review methods in which the comparison of duration of intervention, technique, training regimen, compliance to treatment, prognosis beyond critical period and improvement in visual functions between the dichoptic training and patching therapy were reviewed from the selected journals and then were tabulated. The results proposed that dichoptic training was a better treatment for amblyopia than patching therapy either in children or adult amblyopia. Although advancements have been made, further research was still required to help those treating amblyopia particularly in regards to improvement and maintaining compliance to treatment, binocular treatment and prognosis of patching therapy beyond the critical period.

**Keywords:** dichoptic training, binocular, patching therapy, compliance

## **TABLE OF CONTENT**

<b>TITLE</b>	<b>PAGE</b>
<b>AUTHOR’S DECLARATION</b>	<b>iii</b>
<b>SUPERVISOR’S SIGNATURE</b>	<b>iv</b>
<b>ACKNOWLEDGEMENT</b>	<b>v</b>
<b>TABLE OF CONTENT</b>	<b>vi</b>
<b>LIST OF TABLES</b>	<b>viii</b>
<b>LIST OF FIGURES</b>	<b>ix</b>
<b>ABSTRACT</b>	<b>x</b>
<b>CHAPTER 1      INTRODUCTION</b>	<b>1</b>
1.1      BACKGROUND	1
1.2      PROBLEM STATEMENT	2
1.3      OBJECTIVES OF THE STUDY	2
1.4      SIGNIFICANCE OF THE STUDY	3
<b>CHAPTER 2      LITERATURE REVIEW</b>	<b>4</b>
2.1      DICHOPTIC TRAINING IN AMBLYOPIA TREATMENT	4
2.2      PATCHING THERAPY IN AMBLYOPIA TREATMENT	8
<b>CHAPTER 3      METHODOLOGY</b>	<b>11</b>
3.1      INCLUSION AND EXCLUSION CRITERIA	11
3.2      SEARCH METHODS	11
3.3      DATA EXTRACTION AND ANALYSIS	12
<b>CHAPTER 4      RESULTS</b>	<b>13</b>
4.1      FLOW OF STUDIES THROUGH THE REVIEW	13
4.3      COMPARISON BETWEEN DICHOPTIC TRAINING AND PATCHING THERAPY	14

<b>CHAPTER 5</b>	<b>DISCUSSION</b>	<b>32</b>
5.1	DURATION OF INTERVENTION	32
5.2	TECHNIQUE	33
5.3	COMPLIANCE TO THERAPY	33
5.4	PROGNOSIS BEYOND CRITICAL PERIOD	34
5.5	IMPROVEMENTS IN VISUAL FUNCTION	34
5.6	TRAINING REGIMEN	35
<b>CHAPTER 6</b>	<b>CONCLUSION</b>	<b>36</b>
<b>REFERENCES</b>		<b>37</b>
<b>APPENDIX</b>		
APPENDIX A		43